FIG. 1

12

BEGIN

RECEIVE
DESIRED RATIO
OF FLOW
~ 30

MEASURE FLOW
THROUGH FLOW
LINES
~ 32

CALCULATE AN
ACTUAL RATIO
OF FLOW BASED
ON MEASURE
FLOWS
~ 34

IS ACTUAL RATIO
EQUAL TO DESIRED
RATIO?
~ 36

YES

NO

CALCULATE A
DESIRED FLOW
THROUGH AT
LEAST ONE OF
THE LINES
~ 38

PROVIDE
DESIRED FLOW
TO AT LEAST
ONE OF THE
VALVES
~ 40

END

FIG. 2

Alpha Control Range Qmin = 100sccm
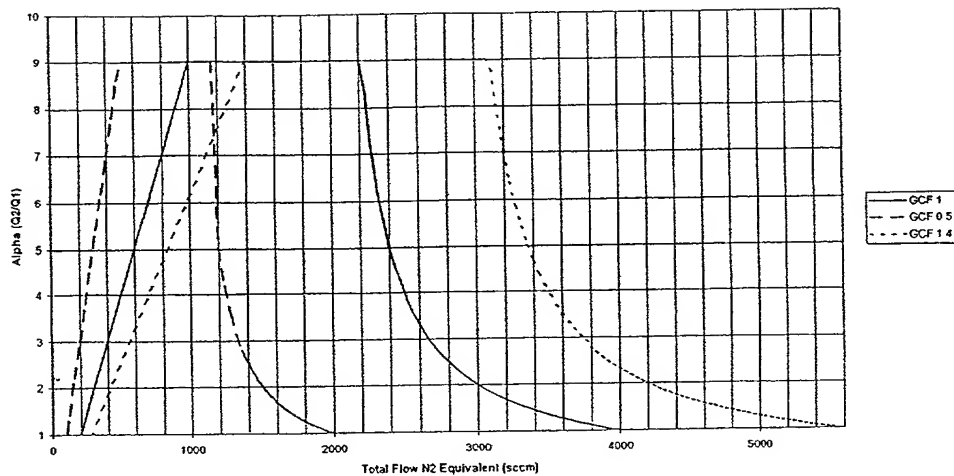
FIG. 3

Alpha Control Range Qmin = 200sccm
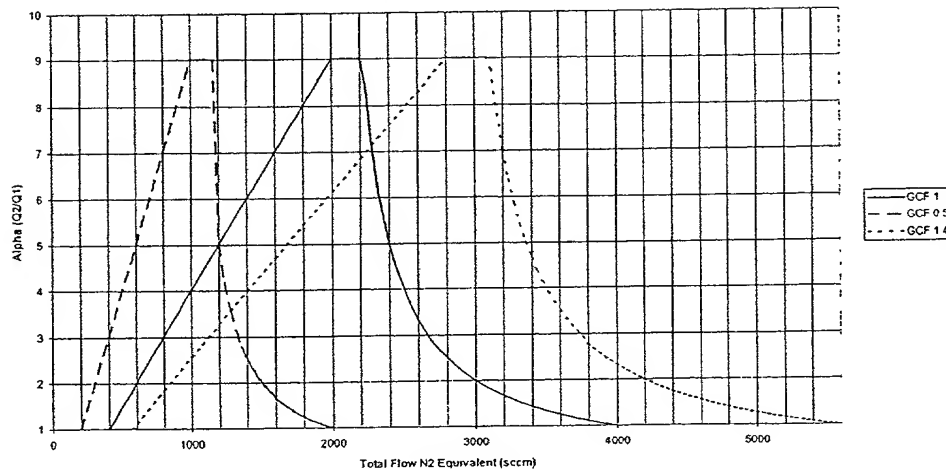
FIG. 4

User interface - 15 D connector Pin out:

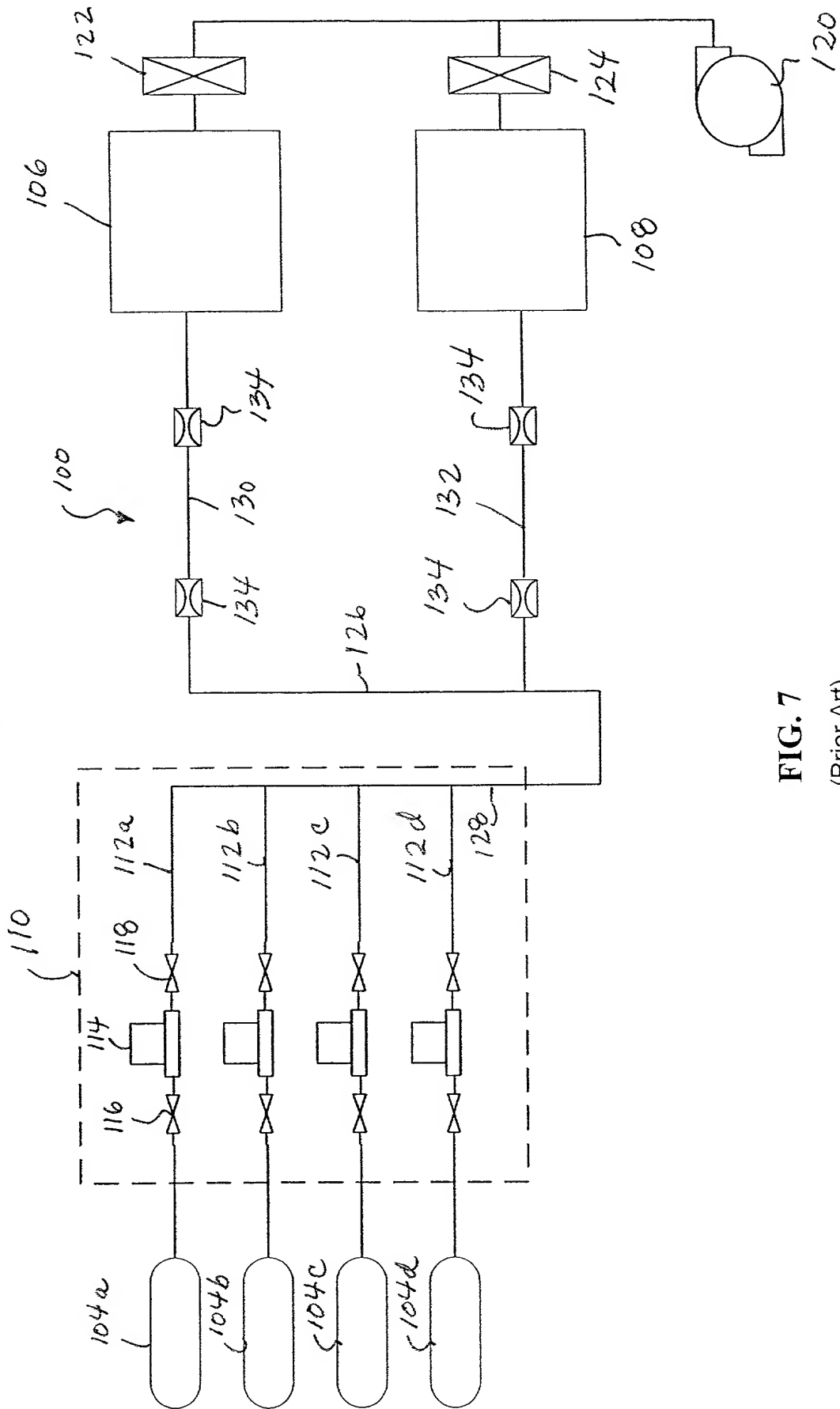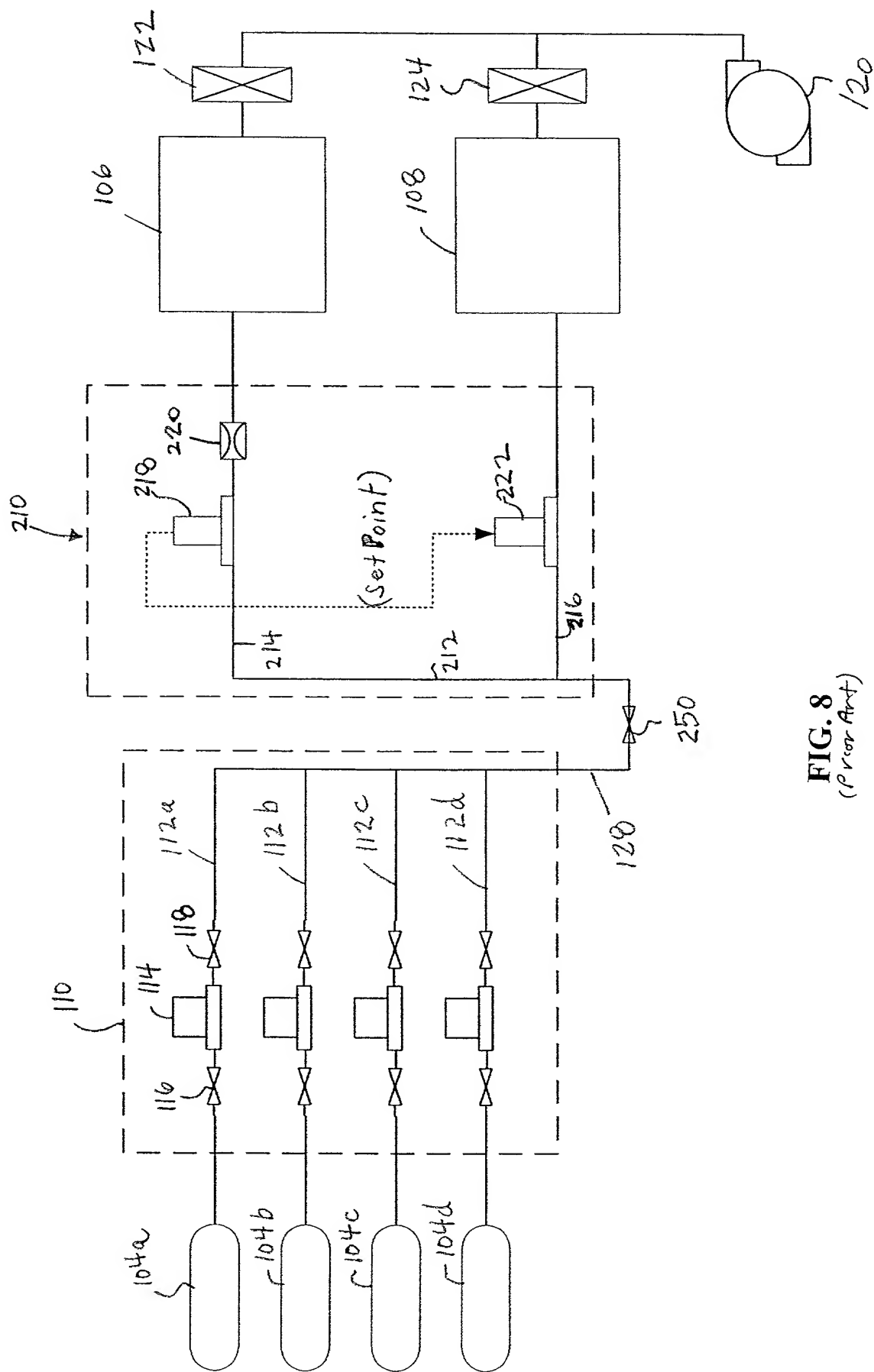| Pin	Assignment	Description
1	NC	
2	Flow Ratio Output	0 – 5 Volts, 5mA max 1 = 1:1, 5 =10:1
3	NC	
4	Valves open	TTL low = valve open
5	Power Common	Power Supply Return
6	-15 VDC Supply	1% Regulated 1 Amp max
7	+15 VDC Supply	1% Regulated 1 Amp max
8	Flow Ratio Command	0 – 5 Volts
9	ALARM	Alpha out of range
10	NC	
11	Signal Common	
12	Signal Common	
13	Disable	TTL low disables the device (Valves shut)
14	Ratio Range Switch	Low = Alpha from 0.1:1 High=1:10
15	Chassis Ground	

FIG. 5
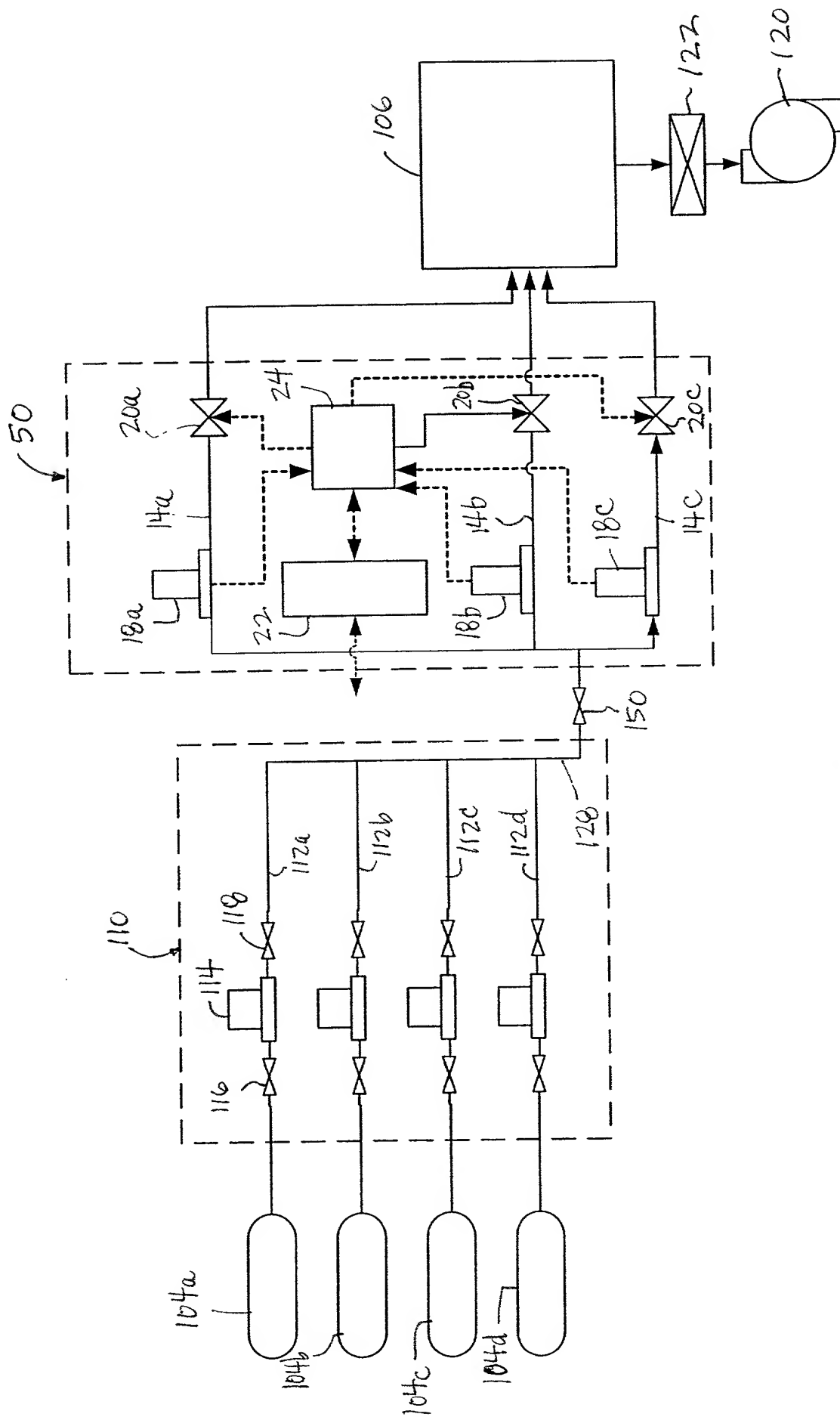
FIG. 6

FIG. 7

(Prior Art)

FIG. 8
(Prior Art)